

# Predicting Individual Radiation Sensitivity: Current and Evolving Technologies *Agenda*

March 17-18, 2008

Division of Allergy, Immunology and Transplantation (DAIT)  
National Institute of Allergy and Infectious Diseases (NIAID)  
National Institutes of Health (NIH)

&

Center for High-Throughput Minimally-Invasive Radiation Biodosimetry, Columbia University Medical Center

Columbia University Kellogg Center, 15<sup>th</sup> Floor of the International Affairs Building\*, New York City

## Day 1: March 17, 2008

8:00 a.m.      **Arrival/Sign In/Refreshments**

8:30 a.m.      **Welcome/Goals of the Meeting**

Dr. Narayani Ramakrishnan, NIAID, NIH, Bethesda, MD

Dr. David Brenner, Columbia University, New York, NY

## Session 1: Individual Radiation Sensitivity in the Context of Radiological Emergencies

Chair: Dr. Narayani Ramakrishnan, NIAID, NIH, Bethesda, MD

8:40 a.m.      **Overview**

Dr. Richard Hatchett, NIAID, NIH, Bethesda, MD

9:10 a.m.      **The radiation oncology- nuclear terrorism perspective**

Dr. Norman Coleman, NCI, Bethesda and ASPR, HHS, Washington, DC

9:40 a.m.      **Possible high-throughput screening logistics**

Dr. David Brenner, Columbia University, New York, NY

## Session 2: Keynote Lecture

Chair: Dr. Eric Hall, Columbia University, New York, NY

10:10 a.m.      **Genetic predisposition for the development of radiation associated cancer**

Dr. Siegal Sadetzki, Gertner Institute, Tel Hashomer, Israel

10:40 a.m.      **BREAK**



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## Session 3: Candidate Genes for Radiosensitivity

Chair: Dr. Albert Fornace, Georgetown University, Washington, DC

- 11:10 a.m.     **The inherited basis of human radiosensitivity**  
Dr. Richard Gatti, UCLA, Los Angeles, CA
- 11:40 a.m.     **Prediction of normal tissue radiosensitivity from polymorphisms in candidate genes**  
Dr. Nicolaj Andreassen, Aarhus University, Denmark
- 12:10 p.m.     **Heterozygous animal models of radiation sensitivity**  
Dr. Lubomir Smilenov, Columbia University, New York, NY
- 12:40 p.m.     **Lunch**

## Session 4: Genome-wide Approaches I

Chair: Dr. Bhadrasain Vikram, NCI, NIH, Bethesda, MD

- 2:00 p.m.     **International consortium to create a biorepository/databank for the performance of genome-wide SNP association studies**  
Dr. Barry Rosenstein, Mount Sinai School of Medicine, New York, NY
- 2:30 p.m.     **Candidate and whole genome SNP association studies of late radiation toxicity in prostate cancer patients**  
Dr. Matthew Parliament, University of Alberta, Edmonton, Canada
- 3:00 p.m.     **US radiologic technologist SNP study**  
Dr. Alice Sigurdson, NCI, NIH, Bethesda, MD
- 3:30 p.m.     **BREAK**

## Session 5: Genome-wide Approaches II

Chair: Dr. Sally Amundson, Columbia University, New York, NY

- 4:00 p.m.     **SNPs and late fibrosis**  
Dr. Jan Alsner, Aarhus University Hospital, Denmark
- 4:30 p.m.     **Predicting radiotherapy induced late toxicity by gene expression profiling**  
Dr. Peter Svensson, MIT, Cambridge, MA
- 5:00 p.m.     **Multiple genetic variants associated with risk of adverse reactions following radiotherapy in cancer patients: A large-scale candidate gene approach**  
Dr. Takashi Imai, National Institute of Radiological Sciences, Chiba, Japan



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## Day 2: March 18, 2008

8:00 a.m.      **Arrival/Refreshments**

### Session 6: Bioinformatics

Chair: Dr. Barry Rosenstein, Mount Sinai School of Medicine, New York, NY

8:30 a.m.      **From cellular to high-throughput predictive assays: Going nowhere faster?**  
Dr. Soren Bentzen, University of Wisconsin, Madison, WI

9:00 a.m.      **Extracting meaningful biomarkers from gene expression data**  
Dr. Michael Bittner, TGen, Phoenix, AZ

9:30 a.m.      **Systems Biology: Integrating information for better predictions**  
Dr. Francis Cucinotta, NASA Johnson Space Center, Houston, TX

10:00 a.m.      **BREAK**

### Session 7: Where Next?

Chair: Drs Norman Coleman & Richard Hatchett, NIH, Bethesda, MD

10:30 a.m.      Dr. Bhadrasain Vikram, NCI, NIH, Bethesda, MD

10:40 a.m.      Dr. David Brenner, Columbia University, New York, NY

10:50 a.m.      Dr. Barry Rosenstein, Mount Sinai School of Medicine, New York, NY

11:00 a.m.      Dr. Soren Bentzen, University of Wisconsin, Madison, WI

11:10 a.m.      **Roundtable Discussion**

12:00 p.m.      **WORKSHOP ADJOURNED**

**\* The meeting will take place in the Kellogg Conference Center, on the 15<sup>th</sup> floor of the International Affairs Building, on the Columbia University Manhattan (Morningside) campus, at the corner of the West 118<sup>th</sup> Street and Amsterdam Avenue. The entrance is on West 118<sup>th</sup> Street**

**The Nearest subway stop is 116<sup>th</sup> Street (at Broadway), on the (IRT) Number 1 line.**

